

Aug 81

Round out your EDP knowledge!

FUNDAMENTALS OF

DATA COMMUNICATIONS

September 21-23/San Francisco • October 19-21/Springfield, VA

October 26-28/Chicago • November 23-25/New York

PLUS December 7-9/Atlanta • January 18-20, 1982/Phoenix • February 8-10, 1982/New York

March 8-10, 1982/Chicago

A comprehensive study of the elements of data communications — meets the needs of data processing systems and operation personnel new to the DC field.

Make your EDP systems more responsive and cost-effective!

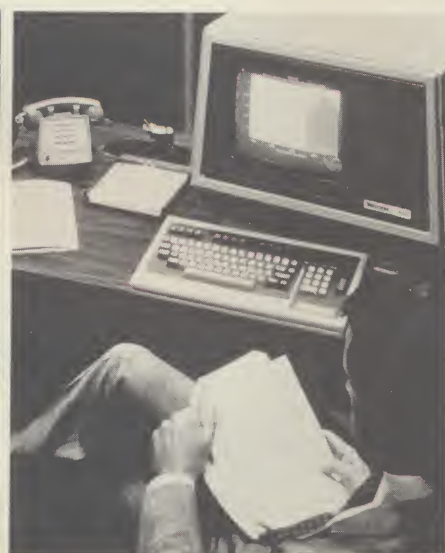
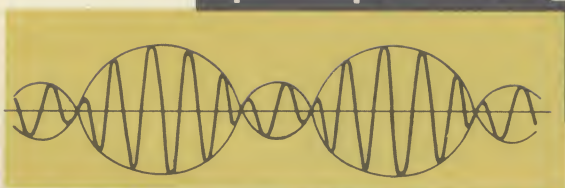
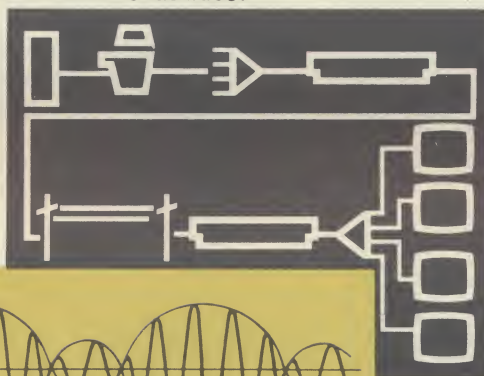
ADVANCED DATA COMMUNICATIONS:

TECHNIQUES FOR SYSTEMS ANALYSIS AND DESIGN

September 9-11/New York • November 4-6/Chicago

PLUS December 14-16/Newport Beach, CA • February 8-10, 1982/Boston

An intensive course for EDP professionals with a solid background in EDP systems analysis and design who seek an update on data communications facilities.



AMA

Information Systems & Technology Division

MEMO TO THE EDP MANAGER:

Meet the demands of the 80s for efficient systems and competent personnel. Get the information you need to merge EDP and data communications technology for accurate, up-to-the-minute operating information and immediate access to that information.

To respond to your needs, we now offer two courses to suit your particular background and experience: for EDP personnel new to the data communications environment, we offer a basic foundation course — for the experienced professional, we provide an update of current techniques and facilities for developing cost-effective, functional systems.

FUNDAMENTALS OF DATA COMMUNICATIONS is designed for personnel who want an introduction to data communications concepts and systems. The course zeros in on all the elements of data communications systems — including comprehensive coverage of every facet involved. Up-to-date information is presented in lecture form — definitions of basic DC terminology are taught and reinforced.

ADVANCED DATA COMMUNICATIONS: TECHNIQUES FOR SYSTEMS ANALYSIS AND DESIGN is intended for EDP professionals with a solid foundation in systems analysis and design. Advanced techniques in designing on-line systems are featured along with a case study which runs throughout the entire course. EDP professionals grounded in the fundamentals of data communications will have the opportunity to develop practical techniques for achieving top EDP performance at minimal cost.

Team attendance is highly recommended for both courses — and special fees are available — the enclosed Registration Information provides details on prices for teams.

I look forward to seeing you and your staff at these informative sessions on data communications systems.

Sincerely,

Alicia Evereklian



Technology
responding to
management's
needs!

FUNDAMENTALS OF DATA COMMUNICATIONS

IN SAN FRANCISCO/SEPTEMBER 21-23, 1981 • MIYAKO HOTEL

415/922-3200

Meeting No. 6564KG-58

COURSE LEADER: DAN ZATYKO, *President*, Zatyko Associates, Santa Ana, CA

IN SPRINGFIELD, VA/OCTOBER 19-21, 1981 • SPRINGFIELD HILTON

703/971-8900

Meeting No. 6564KG-60

COURSE LEADER: EUGENE F. McLAUGHLIN, E.F. McLaughlin & Associates, Rockville, MD

IN CHICAGO/OCTOBER 26-28, 1981 • AMA MANAGEMENT CENTER

Meeting No. 6564KG-59

COURSE LEADER: PETER D. MOULTON, Moulton & Company, Columbia, MD

IN NEW YORK/NOVEMBER 23-25, 1981 • AMA HEADQUARTERS

Meeting No. 6564KG-63

COURSE LEADER: GARY AUDIN, *President*, Delphi, Inc., Pompton Lakes, NJ

Each 3-day meeting starts Monday, 9:30 a.m.; ends Wednesday, 4:00 p.m.

Future Sessions:

December 7-9/Atlanta

January 18-20, 1982/Phoenix

February 8-10, 1982/New York

March 8-10, 1982/Chicago

Meeting No.

6564KG-61

6564KG-64

6564KG-65

6564KG-66

Here's an in-depth course in the elements of data communications that gives you the background you need to analyze data transmission...and make it work for you. Through group discussion, question and answer sessions, and classroom exercises, you'll discover:

- How to analyze the essential components of DC systems — terminals, transmission equipment and services, communications processors and software — and their impact on systems design
- How to select from the wide range of available terminals — interactive, hard-copy teleprinters, batch intelligent and CRT display — and make sure you get the equipment that suits your specific needs
- How to evaluate pricing and other factors in order to make the right choice from various transmission services including conventional or specialized carriers, digital services, satellites, Western Union and value-added networks
- Advantages and disadvantages of various protocols, including asynchronous, synchronous, binary synchronous, bit-oriented, etc.
- The key-design calculations you need to make in order to plan or improve data communications systems — (during the course you'll get actual classroom practice in working out both throughput and response time performance calculations)
- Key facts about network architectures, including the concept of networking, integration of data communications and data processing, and available and expected products

Who should attend: This course is designed for all data processing systems and operational personnel who want to learn the elements of data communications systems, including Systems Analysts, Programmer/Analysts, Computer Specialists, Operations and Communications personnel, and Managers in these areas.

For more immediate access to the information you need — at a price you can afford — register for this instructive course today!

HERE'S WHAT YOU'LL COVER IN

FUNDAMENTALS OF DATA COMMUNICATIONS

Concepts and Terminology

- Terminology. Synchronous vs. Asynchronous transmission. Error control. Protocols. Networks. Half and Full Duplex. Codes.

The Data Communications Environment

- The application of computer communications to business
- Basic types of data communications systems
- Network alternatives and configurations
- Defining the configuration components of a data communications system: *Transmission facilities/Terminals and controllers/Modems and multiplexors/Host processors/Data communications software/Front end processors.*

Terminals and Their Applications

- Dependence of terminal selection upon application
- Categorizing terminals by functional characteristics: *Interactive terminals/Hard-copy teleprinters/Batch/Intelligent/CRT display terminals.*
- Terminal application exercise
- Teleprinter selection: *Basic transmission and control characteristics/Impact vs. non-impact printers/Basic transmission and control characteristics/Character make-up on display/Edit features/Peripheral devices/Programmable capabilities.*
- Batch terminal selection: *Price/performance/Data throughput rates/Reliability and services/Flexibility in terms of local processing.*
- Peripheral configuration alternatives
- Review of application advantages

Intelligent Terminals

- Equipment configuration. Processing capabilities.
- Multi-function applications: *Data entry/Text processing/Distributed processing*
- User developed software

Transmission Equipment

- Functions of modems: *Modulation-demodulation/Acoustical coupling.*
- Alternatives to modems: *Voice grade/Short haul/Wideband.*
- Effects of modems on line turnaround and response time.
- Multiplexor systems: *Frequency Division (FDM)/Time Division (TDM)/Statistical Time Division (STDM)/Operation and application*
- Guidelines for evaluating and selecting a supplier: *Selection criteria — lease, purchase, rent/Maintenance/Supplier size.*

Network Control

- Diagnostics/ Test features/Hardware/Technical control/Patching and switching arrangements/Operational considerations.

Data Transmission Services

- Service suppliers: *Conventional carriers/Specialized carriers/Digital services/Satellites — RCA, AMSAT, Western Union/Value-added networks — TELENET, TYMNET, FAX-PAK.*
- Services and pricing: *Using the public switch network/Dedicated lines — analog, digital/Satellite channels/Cost elements in the data transmission channel.*
- Value-added networks
- Competitive pressures and future offerings: *ACS, SBS, XTEN*

Protocols

- Asynchronous/Synchronous/Binary synchronous/Bit-oriented — HDLC, SDLC, ADCCP, etc./DEC'S, DDCMP/X.25 and impending protocol standards.

Exercise: Performance Calculations

- Throughput calculation — sample problem.
- Response time calculation — sample problem.

Communications Processors

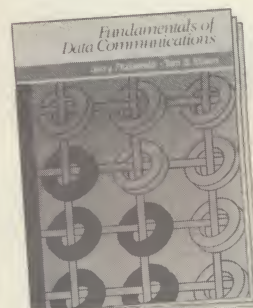
- Applications: Programmable terminals/Terminal controllers/Concentrators/Front ends processors/Switching systems/Host processors
- Advantages of communications processors: *Workload distribution/Cost/Efficiency/Reliability/Growth expansion/Emulation/Vendor offerings*

Communications software

- Batch vs. data communications software: *Basic operation/Workflow/Application control/Database interface.*
- Software functions and characteristics: *Front ends/Terminals.*
- Access methods
- Operational considerations: *Network control/Performance and response time/Restart—recovery/Maintenance.*
- Evaluating software products: *Minicomputers/Main frames/Data communications monitors.*

Network architectures

- Concept of networking/Computer communications architectures/Integration of data communications and data processing/Available and expected products.



FREE BONUS!

Everyone who attends this meeting will receive free: FUNDAMENTALS OF DATA COMMUNICATIONS by Jerry Fitzgerald and Tom S. Eason.